Format No: CP/TF/01

# TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2018-01-24-05** **Date: 27-01-18** |
| **Customer** | : | Assistant Executive Engineer, Project Division, BBMP, Bangalore. |
| **Address** | : | Project Division, BBMP, Bangalore. |
| **Project Name** | : | Construction of Open Gym at Attur lake Ward No.03 |
| **Agency** | : | Technical Manager(West), KRIDL, Bangalore. |
| **Customer's Reference** | : | EE(Project)/Ynk Zone/WO/85/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 24-01-18 |
| **Sample ID No** | : | 2018-01-24-05/01 |
| **Sample Type/Size** | : | Solid concrete blocks of size (400X150X200)mm |
| **Reference to BIS codes** | : | IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10) |
| **Date of test** | : | 24-01-18 |

AE

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

**BLOCK DENSITY:**

| Sl. No. | Measurement of overall Dimensions of Individual Blocks | | | Overall Volume of the Block in Cubic Centimetres | Weight of Oven Dried Block in Kilograms to the nearest 10 Gram | Block Density in Kg/cum*$10^6$ | Avg.Block Density in (Kg/cum) | As per IS 2185 (Part 1):2005 (RA 2010) |
|---|---|---|---|---|---|---|---|---|
| | Length | Breadth | Height | | | | | |
| | mm | mm | mm | ($Cm^3$) | Kg | $Kg/m^3$ | $Kg/m^3$ | |
| 1 | 402 | 150 | 203 | 12241 | 24.850 | 2030.1 | 2025.6 | Not less than 1800$Kg/m^3$ |
| 2 | 401 | 152 | 201 | 12251 | 24.970 | 2038.1 | | |
| 3 | 403 | 151 | 202 | 12292 | 24.69 | 2008.6 | | |

**WATER ABSORPTION:**

| Sl. No. | Wet weight after water absorption | Dry weight (Oven dry) | Water Absorption | Avg.Water Absorption | As per IS 2185 (Part 1):2005 (RA 2010) |
|---|---|---|---|---|---|
| | kg | kg | % | % | |
| 1 | 25.280 | 24.150 | 4.68 | 4.59 | Shall not be more than 10% by mass |
| 2 | 25.310 | 24.280 | 4.24 | | |
| 3 | 25.590 | 24.410 | 4.83 | | |



CIVIL PRO BANGALORE Sig..... Date.....

**Lab ID** : **CP-2018-01-24-05** **Date: 27-01-18**

**Sample ID No** : **2018-01-24-05/01**

**DIMENSION ANALYSIS**

| Sl.no | Length mm | Breadth mm | Height mm | Requirement as per IS 2185(Part 1):2005 |
|---|---|---|---|---|
| 1 | 402 | 151 | 202 | Length : ± 5mm<br>Breadth : ± 3mm<br>Height : ± 3mm |
| 2 | 401 | 150 | 201 | |
| 3 | 403 | 150 | 203 | |
| 4 | 401 | 152 | 202 | |
| 5 | 402 | 153 | 201 | |
| 6 | 402 | 149 | 202 | |
| 7 | 401 | 150 | 200 | |
| 8 | 402 | 151 | 201 | |
| 9 | 401 | 152 | 203 | |
| 10 | 403 | 153 | 201 | |
| 11 | 402 | 151 | 202 | |
| 12 | 401 | 150 | 201 | |
| 13 | 403 | 149 | 203 | |
| 14 | 401 | 150 | 201 | |
| 15 | 403 | 153 | 202 | |
| 16 | 402 | 152 | 203 | |
| 17 | 401 | 152 | 202 | |
| 18 | 402 | 150 | 201 | |
| 19 | 401 | 149 | 201 | |
| 20 | 402 | 148 | 203 | |
| **Average of 20** | **402** | **151** | **202** | |

Asst. Executive Engineer
Project Division,
Yelahanka Zone
Bangalore



CIVIL PRO BANGALORE Sig..... Date.....

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

**Lab ID** : **CP-2018-01-24-05**

**Date: 27-01-18**

**Sample ID No** : 2018-01-24-05/01

**COMPRESSIVE STRENGTH:**

| Sl. No. | Size of solid block | | Area | Failure Load | Compressive strength | Average Compressive strength |
|---|---|---|---|---|---|---|
| | Length | Breadth | | | | |
| | mm | mm | ($mm^2$) | (KN) | $N/mm^2$ | ($N/mm^2$) |
| 1 | 402 | 151 | 60702 | 198.5 | 3.3 | 3.9 |
| 2 | 401 | 150 | 60150 | 223.7 | 3.7 | |
| 3 | 403 | 150 | 60450 | 248.5 | 4.1 | |
| 4 | 401 | 152 | 60952 | 215.4 | 3.5 | |
| 5 | 402 | 153 | 61506 | 228.5 | 3.7 | |
| 6 | 402 | 149 | 59898 | 272.4 | 4.5 | |
| 7 | 401 | 150 | 60150 | 249.7 | 4.2 | |
| 8 | 402 | 151 | 60702 | 245.2 | 4.0 | |

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

**As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)**

| Compressive strength | | |
|---|---|---|
| Grade | Minimum average | Minimum Individual units. |
| C (5.0) | 5.00 $N/mm^2$ | 4.00 $N/mm^2$ |
| C (4.0) | 4.00 $N/mm^2$ | 3.20 $N/mm^2$ |

**Note:**
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**


****End of Report****

Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2018-01-31-06** **Date: 05/02/2018**

**Customer** : Assistant Executive Engineer, Project Division, BBMP, Bangalore.

**Address** : Project Division, BBMP, Bangalore.

**Project Name** : Construction of Open Gym at Attur lake Ward No.03

**Agency** : Technical Manager(West), KRIDL, Bangalore.

**Customer's Reference** : EE(Project)/Ynk Zone/WO/85/2017-18

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 31-01-18

**Sample ID No** : 2018-01-31-06/01

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M15 / 7 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 05/02/2018

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M15 | 29/01/2018 | 05/02/2018 | 150.32 X 150.34 X 150.35 | 22599 | 8.345 | 296.0 | 13.1 | 12.8 |
| 2 | PCC | M15 | 29/01/2018 | 05/02/2018 | 150.22 X 150.24 X 150.25 | 22569 | 8.388 | 286.6 | 12.7 | |
| 3 | PCC | M15 | 29/01/2018 | 05/02/2018 | 150.32 X 150.34 X 150.40 | 22599 | 8.289 | 282.5 | 12.5 | |

AE
Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

**Note:**

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**


****End of Report****

Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2018-01-31-06** **Date: 26/02/2018**

**Customer** : Assistant Executive Engineer, Project Division, BBMP, Bangalore.

**Address** : Project Division, BBMP, Bangalore.

**Project Name** : Construction of Open Gym at Attur lake Ward No.03

**Agency** : Technical Manager(West), KRIDL, Bangalore.

**Customer's Reference** : EE(Project)/Ynk Zone/WO/85/2017-18

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 31-01-18

**Sample ID No** : 2018-01-31-06/02

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M15 / 28 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 26/02/2018

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M15 | 29/01/2018 | 26/02/2018 | 150.32 X 150.34 X 150.35 | 22599 | 8.345 | 391.0 | 17.3 | 18.1 |
| 2 | PCC | M15 | 29/01/2018 | 26/02/2018 | 150.22 X 150.24 X 150.25 | 22569 | 8.388 | 410.8 | 18.2 | |
| 3 | PCC | M15 | 29/01/2018 | 26/02/2018 | 150.32 X 150.34 X 150.40 | 22599 | 8.289 | 427.1 | 18.9 | |

AE
Executive Engnee
Project Division
Vijayanka Zone
Bangalore

**Note:**
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL PRO Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**


****End of Report****

Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Date: 09/02/2018**

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2018-02-05-06** |
| **Customer** | : | Assistant Executive Engineer, Project Division, BBMP, Bangalore. |
| **Address** | : | Project Division, BBMP, Bangalore. |
| **Project Name** | : | Construction of Open Gym at Attur lake Ward No.03 |
| **Agency** | : | Technical Manager(West), KRIDL, Bangalore. |
| **Customer's Reference** | : | EE(Project)/Ynk Zone/WO/85/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 05-02-18 |
| **Sample ID No** | : | 2018-02-05-06/01 |
| **Customer ID** | : | M20 Concrete |
| **Sample Type /Size** | : | 150X150X150 mm |
| **Sample grade/Age** | : | M20 / 7 Days Compressive Strength |
| **Reference to BIS codes** | : | IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5 |
| **Date of test** | : | 09/02/2018 |

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M20 Concrete | M20 | 02/02/2018 | 09/02/2018 | 150.52 X 150.54 X 150.35 | 22659 | 8.345 | 410.1 | 18.1 | 17.8 |
| 2 | M20 Concrete | M20 | 02/02/2018 | 09/02/2018 | 150.42 X 150.24 X 150.45 | 22599 | 8.388 | 395.5 | 17.5 | |
| 3 | M20 Concrete | M20 | 02/02/2018 | 09/02/2018 | 150.42 X 150.34 X 150.40 | 22614 | 8.289 | 404.8 | 17.9 | |

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

**Note:**
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL PRO Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

Format No: CP/TF/01

# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2018-02-05-06** **Date: 02/03/2018**

**Customer** : Assistant Executive Engineer, Project Division, BBMP, Bangalore.

**Address** : Project Division, BBMP, Bangalore.

**Project Name** : Construction of Open Gym at Attur lake Ward No.03

**Agency** : Technical Manager(West), KRIDL, Bangalore.

**Customer's Reference** : EE(Project)/Ynk Zone/WO/85/2017-18

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 05-02-18

**Sample ID No** : 2018-02-05-06/02

**Customer ID** : M20 Concrete

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M20 / 28 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 02/03/2018

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M20 Concrete | M20 | 02/02/2018 | 02/03/2018 | 150.52 X 150.54 X 150.35 | 22659 | 8.345 | 539.3 | 23.8 | 22.9 |
| 2 | M20 Concrete | M20 | 02/02/2018 | 02/03/2018 | 150.42 X 150.24 X 150.45 | 22599 | 8.388 | 513.0 | 22.7 | |
| 3 | M20 Concrete | M20 | 02/02/2018 | 02/03/2018 | 150.42 X 150.34 X 150.40 | 22614 | 8.289 | 499.8 | 22.1 | |

Executive Engineer Project Division Yelahanka Zone Bangalore

**Note:**

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**


****End of Report****